What Gets in the Way of Executive AI Literacy? Barriers and Design Implications

Zyrah Maclan

M.S. in Learning Design and Technology, University of San Diego

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Dr. Rebecca Lundeen

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Abstract

Executives play a critical role in guiding the responsible adoption of artificial intelligence (AI), yet many resist or delay engaging in AI literacy. This research proposal addresses the persistent gap between the strategic importance of AI and executives' readiness to lead its implementation. Existing research indicates that organizations with CEO oversight of AI initiatives achieve stronger business outcomes, whereas those with limited leadership engagement struggle with performance and ethical oversight (McKinsey, 2025a; Stahl et al., 2022). A related misalignment exists between executive perceptions and employee adoption: 13% of U.S. employees use generative AI for at least 30% of their work, compared to leaders' estimates of 4% (McKinsey, 2025b). This readiness gap constrains organizational alignment, strategy, and innovation. The proposed study will use a mixed-methods survey to identify factors contributing to executive resistance to AI literacy and to explore learning design features - specifically chunked, scaffolded, and scenario-based activities that could increase executives' willingness to participate in AI-focused professional learning. Quantitative items will describe common barriers such as time, relevance, and perceived complexity, while qualitative responses will explore preferred training formats and motivators. Findings are expected to inform the design of executive-level AI literacy programs that align ethical governance and strategic decision-making with practical learning formats. Limitations include nonprobability sampling, self-report bias, and limited generalizability; however, the study will provide actionable insights for instructional designers, learning leaders, and organizations seeking to close the leadership gap in AI readiness.

Keywords: AI literacy, executive resistance, organizational readiness, leadership development, instructional design, ethical governance, mixed-methods research

What Gets in the Way of Executive Literacy? Barriers and Design Implications

A growing concern in organizational learning and development is the disconnect between the importance of AI literacy for strategic leadership and executives' willingness to engage in AI education. While AI technologies are rapidly reshaping industries, many executives remain hesitant to develop their own understanding of these tools, often deferring decisions to technical teams. This lack of engagement creates a strategic blind spot where organizational goals for innovation, ethical governance, and workforce readiness risk being undermined. Recent reports highlight this gap, demonstrating that leadership readiness is one of the biggest barriers to effective AI adoption. Organizations where executives actively govern AI initiatives report stronger business outcomes (McKinsey, 2025a). Similarly, SHRM (2025) emphasizes that AI literacy at the leadership level is not just about technical fluency but is essential for workforce strategy, compliance, and ethical oversight. The problem is practical, relevant, and actionable: executives are not meeting the goals of organizational preparedness and responsible AI use, leaving a measurable gap between expectations and current practice.

History

The underlying causes of this problem stem from how leadership has historically approached technological change. During the introduction of computers and later the internet, executives frequently treated emerging technologies as operational tools rather than strategic assets, often delegating responsibility to IT departments. AI presents a more complex shift because it influences decision-making, ethics, and organizational culture. This challenge began to surface prominently in the mid-2010s as AI moved from experimental pilot projects to enterprise-scale applications (Stahl et al., 2022). Early efforts to address the problem often focused on technical upskilling for frontline employees rather than leadership training. Cultural

factors, such as pride in traditional leadership styles, resistance to perceived threats from technical experts, and time constraints, further entrenched the gap. Despite decades of leadership development initiatives, AI literacy has remained underexplored in executive education, leaving today's leaders underprepared to navigate AI's ethical, strategic, and organizational implications.

Current State

At present, the problem persists across industries. According to McKinsey's AI in the Workplace report, employees are often more prepared for AI adoption than leaders assume, highlighting a misalignment between executive perception and workforce readiness (McKinsey, 2025b). LinkedIn's *Workplace Learning Report 2025* underscores this further, noting that 49% of Human Resource and Learning & Development professionals believe their executives are concerned that employees lack the right skills to execute business strategy, yet only "career development champion" organizations are taking systematic steps to upskill leadership and employees (LinkedIn, 2025, p. 12). These champions are 32% more likely to deploy AI-related training initiatives compared to their peers (LinkedIn, 2025). The result is a widespread and urgent issue that while AI is embedded in organizational strategy, the leaders charged with driving that strategy often lack sufficient literacy to do so effectively. This gap affects not only organizational performance but also employee trust, ethical compliance, and long-term resilience.

Implications for Learning Design

The problem has direct implications for instructional design and leadership development. Executives require tailored, executive-friendly learning experiences that emphasize strategic decision-making, ethical implications, and cross-functional collaboration rather than technical coding skills (Colbert et al., 2016).

Instructional designers can play a central role in addressing this gap. For example, they can develop scenario-based learning modules that simulate real-world decision-making around AI ethics, governance, and strategy. They can also design short, focused learning segments that fit the time constraints of executives while gradually building literacy. Finally, integrating AI literacy into broader leadership development programs ensures that executive learning outcomes align with organizational goals.

By addressing this gap, instructional designers can help organizations foster informed leaders who are capable of guiding responsible AI adoption. This strengthens organizational effectiveness, and promotes equity and resilience by ensuring leaders at the top are as prepared as the employees they direct.

Literature Review

Problem Statement

Executives across industries are increasingly expected to guide responsible adoption of artificial intelligence (AI), yet many resist engaging in AI literacy. This creates a leadership gap that affects organizational performance, ethical governance, and workforce trust. Recent evidence shows employees are often more ready for AI than leaders assume, and that leadership is now the primary barrier to scaling value from AI (McKinsey, 2025b). At the same time, organizations where CEOs actively oversee AI show markedly higher rates of bottom-line impact from generative AI, highlighting the importance of senior leadership engagement (McKinsey, 2025a). The affected population includes senior leaders and executives in medium-to-large organizations responsible for strategy, compliance, and innovation. Addressing this gap is critical to align organizational readiness with technological advancement and to ensure ethical, resilient AI adoption.

Definition of Terms

- **AI literacy** – The ability to understand, evaluate, and responsibly apply AI systems in context - not only technically but also with attention to ethics and societal impact (Long & Magerko, 2020).
- **Executive resistance** – Top-management reluctance to adopt or sponsor new strategic initiatives (including new learning) that challenge existing power structures or decision routines; resistance can impede or, when channeled, even shape strategic change (Friesl & Kwon, 2017).
- **Organizational readiness** – A shared state in which members are committed to a change and confident in their collective capability to implement it (Weiner, 2009).

Preliminary Findings

A review of current research highlights three recurring issues that illustrate the importance of addressing executive resistance to AI literacy. These issues include: (1) gaps in leadership engagement with AI adoption, (2) a misalignment between executive perceptions and employee readiness, and (3) opportunities for instructional design to strengthen executive AI literacy through targeted learning strategies. Together, these themes show how limited executive knowledge and involvement can slow organizational progress and how tailored interventions can address this gap.

Theme 1: Leadership Gaps in AI Adoption

Organizations experience stronger outcomes when executives actively oversee AI adoption. McKinsey's State of AI report (2025a) found that companies with direct CEO oversight of AI governance were significantly more likely to report higher business value from generative AI. This outcome was reinforced when leadership involvement was combined with

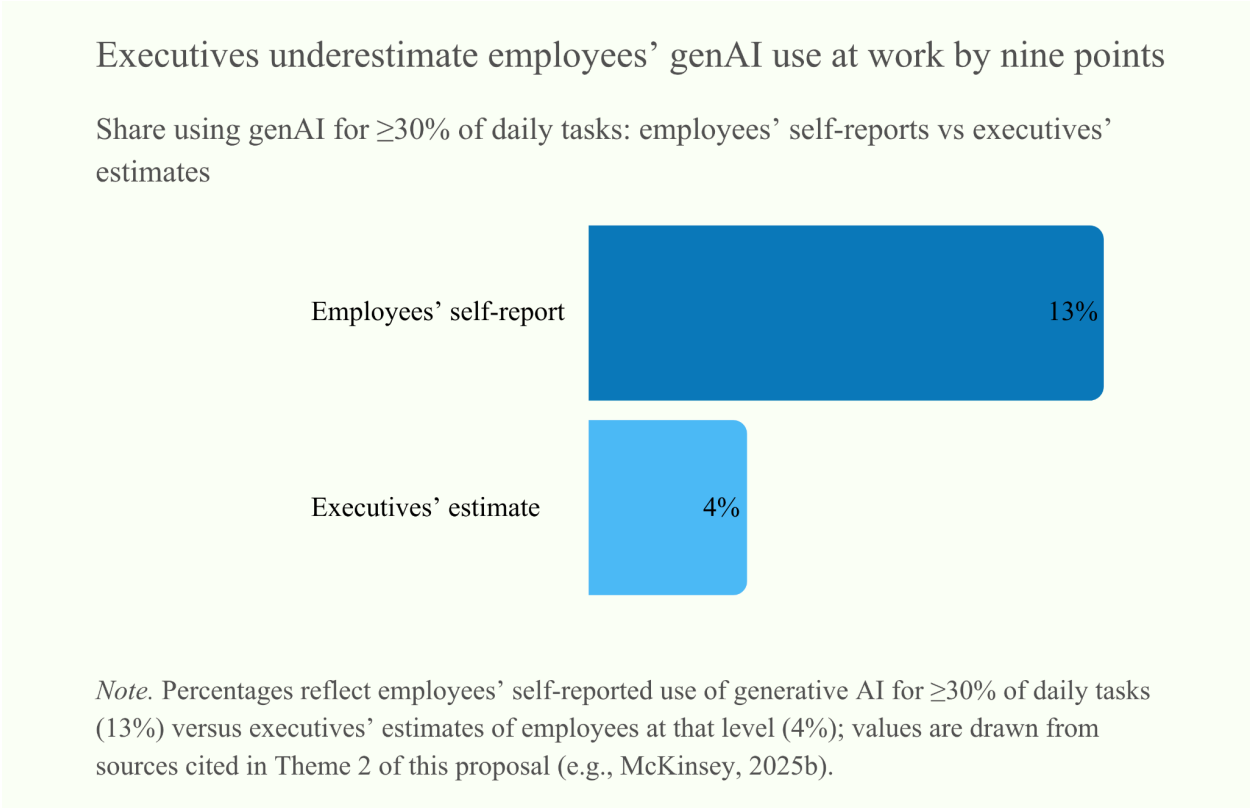
investments in data quality and risk management. In contrast, limited executive engagement has been linked to weaker performance and insufficient ethical oversight. Stahl et al. (2022) also reported that although most organizations recognize ethical challenges related to AI, many adopt only narrow mitigation strategies. These findings demonstrate that leadership knowledge and active participation are essential to translating AI potential into sustainable and responsible organizational practices.

Theme 2: Misalignment Between Executive and Employee Readiness

Research shows a consistent misalignment between how executives perceive AI readiness and how employees are actually using AI in their work. McKinsey (2025b) reported that 13% of U.S. employees already use generative AI for at least 30% of their daily tasks, compared to executives' estimates of only 4%. This difference illustrates a significant perception gap: while employees are moving ahead with adoption, leaders underestimate both the scale and pace of this shift. As a result, executives may miss opportunities to guide AI use strategically and to establish the governance and ethical safeguards needed. This readiness gap is illustrated in Figure 1.

Figure 1

Misalignment Between Executive and Employee Readiness for Generative AI



Note. Percentages reflect employees' self-reported use of generative AI for ≥30% of daily tasks (13%) versus executives' estimates of employees at that level (4%); values are drawn from sources cited in Theme 2 of this proposal (e.g., McKinsey, 2025b).

The LinkedIn Workplace Learning Report 2025 adds that organizations classified as career development champions are 32% more likely than others to provide AI training (LinkedIn, 2025). Although this finding also highlights the importance of leadership engagement described in Theme 1, it reinforces the point that when executives support workforce development, employees' readiness is converted into organizational capability. Together, these findings underscore the risks of executive underestimation and the need for leaders to align their literacy with the workforce's demonstrated readiness.

Theme 3: Instructional Design Opportunities for Executives

Instructional design can play a central role in closing the AI literacy gap among executives by providing targeted learning experiences that emphasize strategy, ethics, and

collaboration. Colbert, Yee, and George (2016) argue that in digitally enabled workplaces, leaders must cultivate higher-order capabilities beyond technical specialization. Applied to AI, this finding suggests that executives benefit most from case-based and scenario-based approaches that allow them to practice governance, ethical reasoning, and strategic decision-making in realistic contexts.

Long and Magerko (2020) further expand the concept of AI literacy to include evaluating AI systems and applying them responsibly within organizational settings. Their framework highlights that literacy is not limited to understanding the technology itself but also involves judgment about its ethical and social consequences. This aligns with SHRM's (2025) emphasis on AI literacy as a leadership competency necessary for compliance, workforce strategy, and ethical oversight. Taken together, these findings show that instructional designers can develop executive learning opportunities that go beyond technical training and directly address the organizational and ethical challenges of adopting AI.

Research Design

Purpose Statement

The purpose of this study is to examine factors that contribute to executive resistance to artificial intelligence (AI) literacy and to identify learning design features specifically, chunked (short, modular) content, scaffolded progression, and scenario-based decision practice, that may increase executives' willingness to participate in AI-focused professional learning. This study aims to produce practical guidance for leadership development teams so organizations can strengthen responsible, strategy-aligned AI adoption.

Participants

The participants will be U.S.-based corporate executives and senior leaders at the director level and above who work in sectors undergoing digital transformation, such as technology and healthcare. Anticipated characteristics include ages 35 to 65, varied gender and ethnicity, and a minimum of eight years of leadership experience. Recruitment will use nonprobability purposive and convenience sampling through LinkedIn posts and direct outreach, along with Association for Talent Development channels. This strategy is suitable when access is constrained and the goal is to generate practice-relevant insights rather than statistical generalization. Given the term timeline, the study will invite approximately 100 executives from warm professional networks and target 80-100 completed surveys (≥80% response rate), with at least 50 usable open-ended responses to support credible theme development. Inclusion criteria require a U.S. corporate setting and a current role at director level or higher with influence on strategy, technology, or people decisions; government and education sectors are excluded to maintain a consistent corporate context. The following sections (Research Questions and Data Collection and Analysis) outline the research design, with the full alignment presented in Table 1 on page 10.

Research Questions

This study addresses two questions:

RQ1. What factors do executives report as barriers to engaging in AI literacy?

RQ2. How do executives describe learning design features that would increase willingness to participate (e.g., chunking through short, modular sequences; scaffolding for progressive difficulty and support; and scenario-based decision practice tied to executive work), including any needed scheduling flexibility?

A mixed-methods survey, combining closed-ended Likert-type items and open-ended prompts within a single instrument, is the most appropriate methodology for these questions and this context. It allows collection of measurable patterns and brief written explanations in parallel, balancing feasibility with credibility for a time-bounded, practice-oriented project (Creswell & Creswell, 2018).

Data Collection and Analysis

Data will be collected through a brief online survey administered in Google Forms. The instrument will require approximately six to eight minutes to complete and will include 15 to 18 items. The first section will capture role and industry information, including age, role level, years in leadership, and industry. The second section will include 5-point Likert-type statements addressing common barriers and enablers. For example, items will ask whether time constraints limit participation in AI-related leadership learning, whether perceived technical complexity reduces interest in AI literacy, whether short 10–15-minute modules would make AI learning more feasible, and whether scenario-based activities tied to executive decisions would make AI learning more relevant. The third section will include two or three open-ended prompts that invite participants to describe what most prevents engagement in AI-related leadership learning and what would make AI literacy training worth their time with respect to format, length, and content. The instrument will be pilot tested with two or three learning-and-development professionals to refine clarity and content validity before distribution (Creswell & Creswell, 2018). The survey will remain open for 10 days, with two reminders (days 3 and 7), to support the targeted response rate noted in the Participants section.

Quantitative analysis for RQ1 will be descriptive. For each Likert-type item, the full response distribution (all five categories) will be reported alongside counts and percentages; the

percentage selecting Agree/Strongly Agree will be highlighted, and a simple 1–5 average may be provided to rank barriers and enablers. Inferential statistics are not planned due to the descriptive aim and the course timeline. Qualitative analysis for RQ2 will use a basic thematic approach. All open-ended responses will be read closely, recurring ideas will be grouped into a small set of themes such as time and scheduling; relevance to role; perceived technical complexity; organizational culture and support; perceived risk and visibility; and preferred format or delivery; and the frequency of each theme will be tallied. Brief, de-identified quotations will illustrate major themes. Integration will occur in a joint summary that aligns the highest-rated quantitative barriers with representative qualitative quotations and a concise design implication, such as offering 10–15-minute, scenario-based modules with mobile access if time emerges as the dominant barrier. This approach reflects introductory mixed-methods survey guidance for feasible, credible descriptions in practice-oriented studies (Creswell & Creswell, 2018).

Table 1

Aligning the Purpose Statement, Research Questions, Data Collection, and Analysis Methods

Purpose Statement: Identify barriers to executives' engagement in AI literacy and specify evidence-based design features (chunking, scaffolding, scenario-based practice) that may increase willingness to participate.		
Research Questions	Data Collection	Data Analysis
1. What factors do executives report as barriers to engaging in AI literacy?	Single online survey including 5-point Likert-type items on time, perceived complexity, relevance to role, organizational support, and perceived risk; administered via LinkedIn and ATD outreach; 10-day field period with reminders on days 3 and 7.	Report full Likert distributions (all categories), counts and percentages, percentage agreeing, and simple 1–5 averages to rank barriers; no inferential tests planned.

2. How do executives describe learning design features that would increase willingness to participate (e.g., chunking, scaffolding, scenario-based decision practice), including scheduling flexibility?	Same online survey including two to three open-ended prompts about helpful formats and conditions, explicitly referencing chunking, scaffolding, and scenario-based decision practice.	Basic thematic grouping of recurring ideas, tally of theme frequencies, and use of brief de-identified quotations; integrated with RQ1 results in a joint summary and practical design implications.

Conclusion

This section brings together what the literature says about the research questions, notes key ethical issues and study limits, and closes with reflections. Summary of Findings highlights recurring themes and any disagreements; Ethical Considerations and Limitations explains how participants will be protected and where the study may fall short; Reflections shares what was learned and how it will guide next steps.

Summary of Findings

Across the sources synthesized in this proposal, the evidence converges on three preliminary conclusions relevant to the research questions. First, executive engagement in artificial intelligence (AI) learning is uneven, and reluctance often stems from time constraints, perceived technical complexity, unclear relevance to role, and organizational culture. Second, when learning is structured around executive decision-making rather than tools, participation and perceived value increase. In particular, short, chunked modules, scaffolded progression, and scenario-based decision practice appear well suited to senior leaders' schedules and responsibilities. Third, learning design is only one lever; alignment with leadership expectations, incentives, and governance is often necessary to sustain adoption. These patterns suggest that a descriptive, mixed-methods survey would likely reveal strong endorsement of time and relevance barriers (RQ1) and would also surface preferences for role-tied, scenario-based activities

delivered in brief sequences with clear strategic payoffs (RQ2). Any remaining disagreements in the literature typically center on whether training alone is sufficient or whether organizational conditions must change concurrently; this proposal acknowledges that tension by pairing instructional recommendations with attention to context.

Ethical Considerations and Limitations

If implemented, the study would adhere to core principles of respect, beneficence, and justice. The online survey would include a concise consent statement describing the purpose, estimated completion time, voluntary nature of participation, the right to skip items, and data handling procedures. No personally identifying information would be collected, and quotations from open-ended responses would be reported in de-identified form to avoid indirect identification of senior leaders or organizations. Burden would be minimized by limiting completion to approximately six to eight minutes.

The sampling strategy (nonprobability recruitment via LinkedIn and Association for Talent Development networks) is practical for access but limits generalizability; findings would be descriptive and most applicable to similar corporate contexts. Social-desirability bias is a risk when respondents self-report attitudes about learning; anonymity and neutral wording can mitigate this concern. Scope decisions, U.S. corporate sector and director level or above, improve internal coherence yet reduce transferability to public or education sectors. Finally, professional identity in learning design can introduce interpretation bias toward instructional solutions; this proposal addresses that risk by reporting full response distributions, retaining dissenting views in qualitative themes, and situating instructional recommendations alongside organizational considerations (e.g., incentives and governance). Guidance on anticipating ethical

issues and documenting limitations follows standard research design texts (e.g., Creswell & Creswell, 2018).

Reflections

Developing the proposal clarified that executive AI literacy is fundamentally about strategic judgment, risk oversight, and cross-functional coordination; tool proficiency is secondary. Aligning the purpose, two focused research questions, and a feasible mixed-methods survey strengthened the internal coherence of the design and kept analysis intentionally simple (distributions, percentages, concise themes) to match the course timeline. The process also highlighted open questions for future work, including how incentives and accountability interact with learning design for senior leaders and whether brief, pilot scenarios tied to real decisions would drive measurable gains in willingness to engage. Going forward, this experience reinforces a practice of pairing evidence-based learning design (chunking, scaffolding, scenario practice) with careful attention to ethics, feasibility, and organizational readiness.

References

Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal, 59*(3), 731–739.https://doi.org/10.5465/amj.2016.4003

Andrew Colbert, Nancy Yee, and Gerard George examine how digital technologies are reshaping work and leadership. They argue that executives need to develop higher-order skills such as strategic vision, ethical judgment, and cross-functional collaboration rather than focusing on technical coding. This supports my research by showing that executive learning should emphasize strategic AI literacy rather than narrow technical expertise.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

This foundational methods text guides the study's survey-based mixed-methods design, including sampling with practical constraints, instrument development and pilot testing, descriptive analysis for closed-ended items, basic thematic analysis for open-ended responses, and integration of quantitative and qualitative strands. It is cited to justify the feasibility-focused approach and to align procedures with established research design principles for time-bounded, practice-oriented studies.

Friesl, M., & Kwon, W. (2017). The strategic importance of top management resistance: Extending Alfred D. Chandler. *Strategic Organization, 15*(1), 100–112.https://doi.org/10.1177/1476127016665253

Markus Friesl and Woon Kwon investigate how top management resistance influences organizational change. They conclude that resistance at the executive

level can shape or slow change, making it strategically significant rather than purely obstructive. This article provides a foundation for defining "executive resistance" in my study and explains why leaders may resist engaging in AI literacy.

LinkedIn Learning. (2025). *Workplace Learning Report 2025: The rise of career champions*. LinkedIn Corporation.https://learning.linkedin.com/resources/workplace-learning-report

This industry report surveys HR and learning professionals to identify workplace learning priorities. It shows that "career development champion" organizations are 32% more likely to provide AI-related training compared to peers. This reinforces my finding that leadership-backed development accelerates AI adoption and highlights how executive engagement shapes workforce readiness.

Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. *CHI '20 Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, (pp.1–16).https://doi.org/10.1145/3313831.3376727

David Long and Brian Magerko propose a framework of AI literacy competencies that include understanding, evaluation, ethical awareness, and responsible application. They emphasize that AI literacy extends beyond technical knowledge and requires broader critical and ethical capacities. This article underpins my definition of AI literacy and highlights the competencies executives need to develop.

McKinsey & Company. (2025a, March 12). *The state of AI: How organizations are rewiring to capture value*.https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai

This global survey analyzes how organizations generate business value from AI. It reports that companies with CEO oversight of AI initiatives are significantly more likely to achieve higher returns from generative AI. This supports my Theme 1 argument that executive engagement is critical for effective AI governance and strategy.

McKinsey & Company. (2025b, January 28). *Superagency in the workplace: Empowering people to unlock AI's full potential*.https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/superagency-in-the-workplace-empowering-people-to-unlock-ais-full-potential-at-work

This report shows that 13% of U.S. employees already use generative AI for at least 30% of their work, compared to executives' estimates of only 4%. The finding illustrates a significant perception gap and highlights insufficient leadership engagement as a critical barrier to scaling adoption. This evidence supports Theme 2, showing how executives underestimate employee readiness.

Society for Human Resource Management (SHRM). (2025). *AI literacy for CHROs: What you need to know—and what your CEO already thinks you do.* SHRM Labs.https://www.shrm.org/labs/resources/ai-literacy-for-chros--what-you-need-to-know--and-what-your-ceo-already-thinks-you-do

This SHRM report emphasizes the importance of AI literacy for senior HR leaders, framing it as essential for workforce strategy, compliance, and ethical oversight. It highlights that AI literacy is not purely technical but a leadership competency. This supports my Theme 3 argument that executive learning must focus on ethical and strategic application of AI.

Stahl, B. C., Antoniou, J., Ryan, M., Macnish, K., & Jiya, T. (2022). Organisational responses to the ethical issues of artificial intelligence. *AI & Society, 37*, 23–37.https://doi.org/10.1007/s00146-021-01148-6

Bernd Stahl and colleagues present a cross-case analysis of 10 organizations responding to ethical issues in AI. They found that while companies recognize risks, they often adopt narrow mitigation strategies. This article demonstrates that executive AI literacy is essential to expand ethical responses and supports my Theme 1 focus on leadership gaps in AI adoption.

Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science, 4(1)*, 67.https://doi.org/10.1186/1748-5908-4-67

Bryan Weiner introduces a theory of organizational readiness for change, focusing on shared commitment and confidence in carrying out new initiatives. The model has become foundational in change management research. This article supports my definition of "organizational readiness" and explains why executive buy-in is critical for leading AI adoption.